# Request for Proposal

# for

# Smart Luminaire Controls & Smart City Technology Solutions
# Goods / Software / Services

**Request For Proposal No. 7000154890**

**Issued: July 29, 2019**

**Proposal Submission Deadline: September 3, 2019 by 3:00 p.m. (Central Time)**

**CPS ENERGY**
**P.O. BOX 1771**
**SAN ANTONIO, TEXAS 78296-1771**
**www.cpsenergy.com**

# EXHIBIT A

# PROJECT SCOPE

## Executive Summary

Smart Cities improve the quality of life for communities by leveraging data and emerging technology to find solutions to community challenges. The SmartSA partnership, coordinated by the Office of Innovation at the City of San Antonio, convenes local organizations that represent critical aspects of citizen life including housing, education, transportation, energy and utilities. These partners coordinate cross-cutting projects, research, and data sharing in support of San Antonio's **Smart City Vision: to build a connected, resilient and inclusive community.** SmartSA projects fall under three impact areas: Access to Services, Mobility and Sustainability. This RFP is the first issued in partnership by SmartSA partners, CPS Energy and the Office of Innovation Smart Cities (OISC).

As part of its services, CPS Energy operates and maintains more than 128,000 streetlights. Managing and responding to streetlight failures is a labor-intensive process that currently consumes a large amount of resources. CPS Energy wishes to explore the installation of smart streetlight control technologies that will enable automated location and management of these devices. Ideally, these technologies will provide CPS Energy with the capabilities to: i) assure that its streetlights are operating as designed, ii) provide events and alerts of those devices which are not operating as expected, iii) provide advance notification of devices that need to be pro-actively scheduled for preventative maintenance activities; and iv) provide new schemes for operating streetlights in ways that enhance public perception and safety.

OISC is looking to address a number of use cases shaped by the community and City Departments. In 2019 OISC conducted a Community Engagement survey garnering nearly 4,000 responses from residents and visitors who live, work, and play in the zones. The survey reflected challenges faced by residents in the Innovation Zones, including issues of mobility, environmental quality and pedestrian safety.

OISC initially intends to focus on the following Smart City Technology Use Cases: i) Air Quality sensing; ii) Acoustic Noise detection; iii) Temperature Sensing; iv) Automated Parking Solutions; and v) Automated Water Level Indication and Monitoring, (in partnership with the San Antonio River Authority (SARA)).

CPS Energy and the City of San Antonio have a long history of working together to provide the citizens of San Antonio with safe, affordable and reliable energy services, and have collaborated to issue this RFP for smart Streetlight Controls and Smart City Technologies to assist in solving the issues described above.

The Statement of Work, along with Exhibit E – Minimum Requirements, Smart Luminaire Controls; and Exhibit F - Minimum Requirements, Smart City Technology Use Cases, represent specific requirements for technology solutions that CPS Energy and OISC wish to explore, test and implement. The "Pilot Phase," (Phase I) of this RFP will select no more than three vendors to

pilot their solutions in each of the three Innovation Zones. Lessons learned from the Pilot Phase will determine the development of criteria for Phase II, which will select a vendor to deploy their solution city-wide.

**Goals of this RFP**

The primary goals of this RFP are:

- To select technology solution providers with whom CPS Energy and the OISC will develop and implement a series of technology solutions to explore, implement and test smart luminaire controls and smart city technologies in three Pilot areas (a.k.a. "Innovation Zones") of the CPS Energy service territory located within the City limits of San Antonio.

- To use the results of these Pilots to engage the successful technology solution providers to negotiate best and final services and pricing, and to subsequently award a contract for systemwide automation of smart luminaire controls for CPS Energy's 128,000 streetlights; and

- To use the results of these Pilots to engage the successful technology solution providers in a second phase of the RFP to negotiate and award a System Wide contract for rollout of one or more of the technologies tested under the Smart City Use Cases deployed in the Pilot.

Furthermore, CPS Energy and OISC:

- Will jointly review and award contracts to a technology solution provider for a Pilot that best meets the requirements in this RFP.

- Have determined that CPS Energy will award one contract, on behalf of both CPS Energy and the City of San Antonio, to each qualified technology solution provider selected for the pilot phase under this RFP.

- Have determined that the infrastructure and solution(s) provided for the pilot phase under the respective contracts will be owned, operated and maintained by CPS Energy in accordance with the respective Minimum Requirements specified in each contract; and

- Have determined that the data developed and delivered for all technology solutions under the Pilot Phase of this RFP will be owned by CPS Energy, but with the help of the technology solution provider, made accessible to the OISC and its partners for such data as is needed for their use, operations and evaluation.

## Background and Intent

CPS Energy is currently underway with a multi-year project to convert its approximately 128,000 streetlights from legacy lighting technologies to LED technology. That project is separate from this RFP.

Under the terms of this RFP, CPS Energy intends to procure and implement a smart luminaire control solution that meets requirements that include automated detection of LED functional status, automated dimming, energy measurement, and other functions, in accordance with SOW Exhibit E – Minimum Requirements, Smart Luminaire Control.

Under the terms of this RFP, the OISC likewise intends to implement smart city technology solutions defined by five Use Cases which include: i) Air Quality Sensing; ii) Acoustic Noise Detection; iii) Temperature Sensing; iv) Automated Parking; and v) Automated Water Level Indication and Monitoring; in accordance with SOW Exhibit F – Minimum Requirements, Smart City Technology Use Cases.

Furthermore, CPS Energy and the OISC also request respondents to provide additional details regarding the vendor's "Smart City Road Map", beyond the minimum CPS Energy Streetlight Controls and the City of San Antonio Use Cases requested in this RFP, for consideration by CPS Energy and OISC. This roadmap may outline a multi-year plan for the maintenance, interoperability and resilience of the potential solution.

## Innovation Zones

The three Pilot Innovation Zones are:

- **Innovation Zone 1, Downtown.** The Downtown Innovation Zone 1, shown in the enclosed maps, is roughly bounded by W. Martin St., S. Frio St., W. Cesar E Chavez St., and IH 37S, and is dominated by a mix of commercial, historic, educational, residential and park spaces including the Downtown UTSA Campus, the Alamo, Shops at the River Center, Main Plaza, and Hemisfair Park. The Downtown Innovation Zone also encompasses parts of the San Antonio Riverwalk, an area some of whose customers and utilities are subterranean in nature, thereby presenting a number of potential technology challenges. This area is an important hub for businesses and tourists alike, and thereby provides a critical zone for testing of the various technologies and solutions requested in this RFP.
    - **The challenges in this zone identified by the community are: walkability, lighting, and access to services.**

- **Innovation Zone 2, Medical Center**. Contains the Medical Center, including the University of Texas Health Science Center, VA, and Methodist Hospitals and is located outside Loop 410, northwest of Downtown. As shown in the enclosed maps, the Medical Center Innovation Zone is roughly bounded by Louis Pasteur Dr., Babcock Rd., Wurzbach Rd., and Fredericksburg Rd., and is dominated by a mix of residential and commercial customers including a variety of food establishments and apartment complexes, as well as

banks and large medical offices. As a major health center accommodating stakeholders which include medical professionals, students, and those seeking medical care, this area is considered a critical zone for testing of the various technologies and solutions requested in this RFP.

- **The challenges in this zone identified by the community are: walkability, lighting, and flooding & drainage.**

- **Innovation Zone 3, Brooks**. Refers to a majority of the area encompassing Brooks City Base, the former Brooks Air Force Base, now turned into mixed-use development and located approximately seven miles southeast of Downtown. As shown in the enclosed map, the Brooks Innovation Zone is roughly bounded by Old Corpus Christi Rd., Corpus Christi Hwy, Goliad Rd., and SE Military Dr. By December 2019 Brooks anticipates over 4,000 employees operating and working in a mix of small and medium commercial businesses representing manufacturing, retail, hospitality and technology industries. As an emerging center of innovation, including emerging employers and academic institutions, this area is a showcase test bed of the possibilities of smart technologies and solutions requested in this RFP.
  - **The challenges in this zone identified by the community are: walkability, lighting, and flooding & drainage.**

**Scope of Technology Solutions**

The expected deployment of technology solutions, by Zone, by technology solution provider are as follows:

- ✔ Luminaire Controls
- ✔ Air Quality Sensing
- ✔ Acoustic Noise Detection
- ✔ Temperature Sensing
- ✔ Automated Parking
- ✔ Auto Flood/Water monitoring
- ✔ Optional (Supplemental Solutions)

The following additional information is provided to clarify the scope of effort within each Innovation Zone.

i. **Luminaire Control Solution, Required**. CPS Energy anticipates the implementation of smart luminaire controls on approximately 15 streetlights, in each of the three Innovation Zones. Each Technology provider will deploy its smart luminaire control equipment on the streetlights in each of the respective zones, along with the associated Smart Control Solution software required to operate and maintain these devices.

ii. **Use Case 1 - Air Quality Sensing Solution, Required**. OISC anticipates the implementation of a minimum of 2 Air Quality Sensing device, by each technology solution provider, in all of the Innovation Zones.

iii. **Use Case 2 – Acoustic Noise Detection Solution, Required.** OISC anticipates the implementation of a minimum of 3 Acoustic Noise Detection devices, by each technology solution provider, in all of the three Innovation Zones.

iv. **Use Case 3- Temperature Sensing Solution, Required.** OISC anticipates the implementation of a minimum of 2 Temperature Sensing device, by each technology solution provider, in all of the three Innovation Zones.

v. **Use Case 4 – Parking Solution, Required**. OISC anticipates the implementation of a minimum of 1 Parking Automation implementation, consisting of an implement that detects the availability of on-street parking, thereby enabling the development of a mobile application allowing users to scout available parking remotely, by each technology solution provider, in all of the Innovation Zones.

vi. **Use Case 5 – Water Level Indication and Monitoring, Required.** OISC in partnership with the San Antonio River Authority (SARA) anticipates the implementation of a minimum of 1 water level indication and monitoring device, by each technology provider, in all of the Innovation Zones.

vii. **Supplemental Solutions, Optional.** If proposed by a technology provider, and at OISC and CPS Energy's sole discretion, OISC may consider the implementation of supplemental technology solutions in 1 or more of the Innovation Zones.

Finally, CPS Energy and OISC anticipate that the most successful bidders:

- Each will, ideally, use their own, common communications platform to integrate and provide all technology solutions;
- Each will, ideally, use their own, common software application platform to integrate and provide all technology solutions;
- Each will, ideally, provide the ability to export any and all data from the technology solutions.
- Each will, ideally, use a single, common presentation interface that allows CPS Energy and OISC and/or City Departments to view, manage and operate all technology solutions.
- Each will provide evidence that its solution be designed and implemented utilizing security standards that adhere to local, state and federal privacy laws.
- Each will, ideally, consider and demonstrate how its technology impacts our community and propose innovative opportunities to creatively engage citizens in the use of its technology during the Pilot phase in the respective Innovation Zones.

**Supplemental Technologies and Solutions (Optional)**

As mentioned above, CPS Energy and OISC also encourage respondents to provide additional recommendations for provision of "supplemental technologies and solutions", beyond the minimum technology solutions required in this RFP.

With that, CPS Energy and OISC caution that:

- Additional consideration will not be given to supplemental technologies and solutions if the respondent fails to offer and comply with the minimum elements of this RFP, e.g. (Luminaire Controls and the Use Cases); and

- Should the respondent(s) offer supplemental technologies and solutions for consideration, CPS Energy and OISC assert the discretion to determine whether or not to proceed with implementation of any such "supplemental technologies and solutions" as may be proposed.

**Pilot Award**
CPS Energy will award a contract for the Pilot phase of the project to vendors to implement their solutions that best meet the Streetlight Controls and Use Cases described in this RFP. Criteria for the evaluation is provided below.

**Full Systemwide Deployment Award**
CPS Energy and OISC will evaluate the results of the Pilots in the Innovation Zones by the vendors during the pilot phase. Using those results and applying "lessons learned", CPS Energy and OISC may provide supplemental criteria in the technical, business, legal and financial categories in the form of a Request for Supplemental Information (RFSI) as part of the Best and Final Offer (BAFO). The RFSI and BAFO will be issued to those Pilot vendors who have successfully passed the Pilot technical and contractual analysis process. Using the results of the RFSI and BAFO process, CPS Energy and OISC will evaluate and award a single contract for full system-wide deployment of the selected technologies.

**Initial Pilot Evaluation Criteria**
Initial bids for award of a Pilot will be evaluated based on the following criteria:

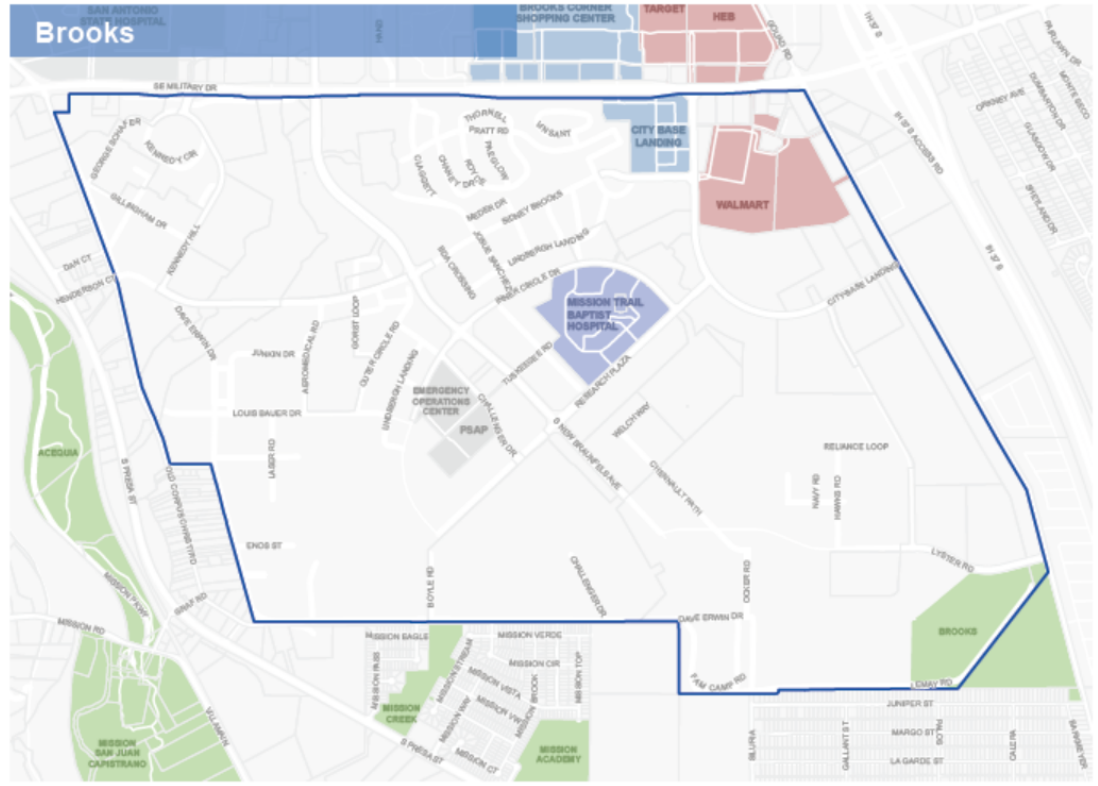
- Community Involvement
- Experience and qualifications
- Functionality and Interoperability
- Maintenance, Operations, and Support
- Pricing
- Security
- Deployment
- Data
- Reputation and Financial soundness of the Respondent
- Economic Development

**System wide Deployment Evaluation Criteria**
The final award for full system wide rollout of the selected vendor solution will be evaluated based on the following criteria. CPS Energy:

- Community Involvement
- Experience and qualifications
- Functionality and Interoperability
- Maintenance, Operations, and Support
- Pricing
- Security
- Deployment

- Data
- Reputation and Financial soundness of the Respondent
- Economic Development
- Additional criteria will be determined based on evaluation of pilot results and lessons learned

## Innovation Zones





## Innovation Zones continued:


Medical Center
HEALTH CAREERS HIGH
FS32
METHODIST SPECIALTY & TRANSPLANT HOSPITAL
ST LUKE'S BAPTIST HOSPITAL
UNIVERSITY HOSPITAL
VA HOSPITAL
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER
METHODIST HOSPITAL
OAK HILLS COUNTRY CLUB